



**SOLANO COUNTY**  
**Department of Resource Management**

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September 1, 2011

Michael Machado, Executive Director  
Delta Protection Commission  
14215 River Road  
P. O. Box 530  
Walnut Grove, CA 95690

RE: Solano County Comments on the Draft Economic Sustainability Plan (ESP) for the  
Sacramento-San Joaquin Delta

Dear Mr. Machado:

Solano County appreciates the opportunity to comment on the current draft. We recognize the significance of this document relative to future key water policy initiatives in the Delta, most significant being the Delta Stewardship Council's (DSC) efforts to formulate the Delta Plan. Accordingly, we have prepared an extensive set of comments for your consideration. They are organized in a chapter by chapter manner with specific page references as appropriate.

Our overall assessment of the current Economic Sustainability Plan (ESP) is that it represents a positive step in beginning to recognize the magnitude of the impacts the Delta area will incur as a result of the Delta projects currently being contemplated by the state and Federal government and the State and Federal Water Contractors. In portions of the Delta the changes will be nothing short of devastating to local communities and economies. We were pleased that the ESP contains analysis and statements that make it clear that the Co-Equal Goals from the 2009 water legislation will not be achieved under the more aggressive conveyance and habitat mitigation options being considered through the Bay Delta Conservation Plan (BDCP) and the Delta Plan. The reality is the Delta communities and landscape, as they have evolved and currently exist, is expected to be in many respects, sacrificed for the benefit of economies in other portions of the State as a result of the more aggressive scenarios under review.

We also agree with the analysis in the ESP that dispels the contention by some interests that new recreational opportunities will emerge as a result of habitat and water projects in the Delta. Plans that can somehow offset the other socio-economic impacts that will occur as a result of those projects. The County certainly welcomes new recreational opportunities that might emerge. However, the analysis clearly illustrates the value of Delta agriculture and its

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associated economic output that far outweighs any conceivable recreation-related economic benefit associated with habitat projects. Compound the economic impact of taking lands out of private agricultural production into public ownership, and the likely scenario that local government will end up with costs in servicing those areas, and you have the net result being a very negative fiscal impact for Delta counties.

Why are these points important to Solano County? The county has significant acreage in the primary Delta, much of it coexisting with viable and sustainable agricultural uses. There are also significant natural gas field and other existing economic resources within areas that are being targeted for habitat restoration under the BDCP and other Delta Plans being contemplated. Communities in the Delta area that grew up in support of these activities are at risk. The scale of Delta Planning efforts and the statewide implications has the effect of minimizing impacts to such areas. Solano County finds this to be unacceptable and a major flaw in the Delta planning process. The County believes local impacts should be avoided wherever possible, and where avoidance is not feasible there should be clear and unambiguous commitment for full mitigation. Substantive recognition of local Delta impacts, along with language to avoid or fully mitigate impacts has been largely missing or vaguely addressed in all Delta planning documents to date. It has been far too easy for State water planners to default to the subjective co-equal goals and larger State interests. We see this as poor public policy at best and irresponsible at worst. The State and Federal government should be sensitive to the need for equity in impacts and benefits throughout all regions that will be affected by the water projects. We are encouraged that the ESP is the first State water planning document that begins to recognize these impacts.

In light of Solano County's circumstances referenced above, we have several broad suggestions to enhance the comprehensiveness of the ESP. These include:

1. The plan currently well addresses impacts of tidal marsh proposals in the south Delta but fails to acknowledge the impacts in other areas. Our interpretation of current Delta Plans is that Solano County contains significant acreage in the Cache Slough complex that is at risk of conversion for tidal habitat restoration. In the most aggressive proposals, much of the area could be impacted particularly if a "domino" affect occurs once portions of an area are converted. In such circumstances other nearby agricultural areas become at risk due to isolation or physical change associated with tidal restoration efforts. Given the magnitude of potential agricultural loss, the County requests reduced acreage targets for Cache Slough similar to what is recommended in the current Draft ESP for the south Delta.
2. The ESP contains a reasonable economic analysis at the macro Delta level but could drill down further at the county by county level. There is some economic data and analysis on a county by county basis, but we are not convinced it provides the complete picture of the local economies. The county requests that language be incorporated into the ESP requiring additional economic analysis under county specific ESP's. Essentially, the Federal/State government would require BDCP proponents to fund and work with each county to prepare a localized ESP. The findings and recommendations of each ESP would then be factored into the larger policy decisions that would affect each county. Our reasons for recommending such an approach are multiple. They include:
  - a. State water planning efforts to date have largely ignored a role for local government in the discussion. We believe clear and defined collaboration with local entities will be essential to the success of whatever Delta water alternative is chosen.

- b. Impacts to the local infrastructure and services are only given cursory references in State water planning documents we have seen to date. We believe clear and specific language is needed. The ESP has the opportunity to emphasize this point.
  - c. Clear and detailed information is needed on county specific economic impacts. Such data will be needed to determine where avoidance is needed or in cases where impacts can't be avoided, the level of mitigation that is required. We also believe a provision should be contained in the ESP committing the State to require that full mitigation to local jurisdictions for lost property taxes, sales taxes, and other revenues that will be associated with conversion of private land to public ownership.
  - d. There should also be text in the ESP acknowledging that the planned State water projects will add to local service costs. These would include such factors as calls for water rescues on Sheriff services, fire services, emergency medical technician coverage, trash clean up, road maintenance and other factors often associated with opening up private lands to public use where local revenues are lost but services are still required.
3. In a concept similar to our suggestion on county specific ESP's, Solano County has suggested to the Delta Stewardship Council that provisions should be incorporated into the Delta Plan for a county specific master plan process addressing how habitat restoration projects would be integrated with county plans. Our suggested language is attached in Exhibit 2. This would be a joint effort between the Federal/State agencies, water agencies, and local Counties. Funding would be from the agencies benefiting from the projects. We believe there are clear advantages to utilizing local knowledge in these planning efforts. Potential advantages include better coordination between Federal//State and local plans; a more comprehensive assessment of how to preserve the best agricultural lands through strategic delineation of tidal restoration areas, and better communication with the public that will be affected. To date the Stewardship Council has not been responsive to our suggestion.
4. Our Chapter 4 specific comments (Attachment 1) reflect deep concern with how the ESP currently addresses levee issues other than the deeply subsided islands with levees designated as "core levees." For example, the emphasis on "core levees" seems to focus on the subsided islands of the Central and South Delta without due consideration to the ongoing work that is essential to keeping the "non-core" levees at their present PL 84-99, or better, condition. It appears that levees for water quality purposes are given higher importance relative to flood control only and Federal Project Levees, which appear to be dismissed as not essential to "Delta as a Place." The ESP Chapter 4 appears to be drafted as a technical justification for bringing "core" levees up to a minimum standard, PL 84-99, which is both reasonable and the original intent of the Delta Levee Maintenance Program, but does so by either ignoring or "writing off" the need to continue supporting project and non-core levee funding for maintenance and improvement. Other than directing the "core levee" improvements on the balance of existing bond funds, the chapter is ambiguous on funding options for the non-core levees. Overall, we believe there are serious flaws in the analysis, conclusions and recommendations and highly urge further work on this chapter.

Summarizing our general comments, Solano County has already been seriously impacted by the current economic downturn. At this point there does not seem to be much relief in sight.

The county does not need another external factor adversely impacting our local economy, which is exactly what the Delta Plans that appear to be emerging do, in the short and long term. Private sector investment in the Delta portions of the County have already been held back by decades of uncertainty regarding the Federal/State ecosystem projects. It is highly likely that there would be additional acreage in higher value crops in the County's primary Delta sans the uncertainty that exists, particularly in the Cache slough area.

The County recognizes the broader economic, resource and environmental issues involved in the current Federal/State water planning efforts. We remain optimistic for an alternative to emerge that both meets broader statewide water needs and objectives and preserves the Delta communities including the agriculture industry that is clearly the backbone of the area. It is recognized that some impacts will occur. The county simply seeks clarity and commitment in the Delta Plan and BDCP that impacts to local Counties are evaluated fairly and objectively; avoided where possible; and where impacts can't be avoided, they are mitigated fully. We believe the ESP can re-enforce these principles in its recommendations to the Delta Stewardship Council.

Thank you for considering our comments. Detailed chapter by chapter comments are contained in Attachment 1 followed by county's recommendation for County by County master plan process in Attachment 2. Background information on Solano County's Delta Water Issues and Concerns are contained in Attachment 3.

Sincerely,



Bill Emlen, Director  
Department of Resource Management

Attachments:

1. Chapter by Chapter Comments on the ESP
2. Solano County Suggestions for Joint Master Planning of Water Projects
3. Solano County Facts, Issues, and Concerns
4. Rio Vista Estuarine Research Station and Rio Vista Fish Technology Center

cc: Senator Lois Wolk  
Assembly Member Mariko Yamado  
Solano County Board of Supervisors  
Birgitta Corsello, Solano County Administrator  
David Okita, General Manager, Solano County Water Agency  
Mike Hardesty, General Manager, Reclamation District 2068  
Delta Counties Coalition  
Jim Allen, Agricultural Commissioner, Sealer of Weights and Measures

## JULY 21, 2011 PUBLIC DRAFT

### ECONOMIC SUSTAINABILITY PLAN FOR THE SACRAMENTO-SAN JOAQUIN DELTA

#### General Comments:

- The Delta Reform Act of 2009 that required the Delta Protection Commission to prepare an Economic Sustainability Plan for the Delta was well-intentioned but did not allow for adequate time nor funding to ensure that this very important process was properly designed, planned and implemented (with input from key stakeholders and a credible public engagement process).
- Recognizing these limitations, the current report is much improved from the initial draft. However, because of the short timeframe involved in the current process and the importance of this document in analyzing the viability and sustainability of Delta communities and businesses, it is important for authors to make clear recommendations regarding additional reports and studies to ensure quantitative and qualitative data is available to substantiate key findings. It is critical that interests of the Delta are properly valued, respected and protected, and if done properly, this document can lay a strong foundation supportive of that objective.
- The beginning of the report should include a reprint of the Delta Reform Act that tasks the Delta Protection Commission with developing an economic sustainability plan.
- A glossary should be included along with definitions accompanying the initial use of terms such as tertiary treatment, the Legal Delta, Primary Zone, Secondary Zone and other key geographical references.
- The authors of this report should solicit information regarding other studies that are planned or in progress that could impact the economic sustainability of the Delta. For instance, the Solano Transportation Authority is working on the Solano 12 Safety Improvement Project that will be complete in the fall of 2011. The contact is Dale Pfeiffer of Fountain Economics at 210 Carson Court, Vacaville, CA 95688 707-447-7027.
- The Delta Stewardship Council (DSC) should prepare a stand alone cost benefit analysis of everything that impacts the Delta Plan.
- There should be focus on ensuring positive changes in the aesthetic quality of this region.
- Chapters 9 and 10 could be moved into a background material section.
- The Delta Protection Commission Management Plan should be included in the Delta Plan.

## Chapter 1

- When describing the limitations of this report, there should be a brief outline of the Scope of Work versus what should be part of a comprehensive analysis that will fully support investment and full mitigation of the Delta. There should be a recommended list of additional studies, reports, or known unknowns (such as flow criteria or regional transportation impacts) that should be led by other Delta entities such as the Stewardship Council, to ensure the viability and sustainability of the Delta. For example, in many instances it will be vital to require performance of a cost-benefit analysis to justify mitigation requests or the proper determination of beneficiaries. If this is not part of the current report because of limited resources such as time or funding, the authors should identify what is necessary to address these issues effectively to get a comprehensive cost-benefit analysis of Delta policy proposals. This will be extremely important for local government when establishing credible mitigation baselines.
- The introductory chapter should include information about the timeframes and key deliverables necessary to complete the ESP within the mandated timeframe. It should discuss any adjustments that were made and the rationale behind any such changes.
- The geographic focus of the study section, although “primarily focused on protecting and enhancing the natural resources of the Delta and the Primary Zone of the Delta” should also include Rio Vista. The City of Rio Vista has been working with the Department of Water Resources to locate the Rio Vista Estuarine Research Station (RVERS) at the Army Base. This would centralize all current Delta Research in one location. In addition, the US Fish and Wildlife Service is looking to locate a refuge Delta Smelt Hatchery at the base and establish a major research facility in the City’s industrial area (See the Rio Vista Estuarine Research Station and Rio Vista Fish Technology Center attachment).
- Recommend a Master Plan type approach for the Delta that provides a solid framework for regional sustainability that includes all aspects of the community structure and economic supports that will fortify and improve this region over time. This type process would involve a high-level of stakeholder involvement (local government) including a major public engagement process. It would be imperative to explore creative public and private funding options to ensure proper planning, design, implementation and ongoing operations and maintenance expenses would be covered in perpetuity.
- Although the severity of the current economic downturn was not fully anticipated when the Delta Vision Strategic Plan (DVSP) of October 2008 was completed, its primary Goal 2: Recognize and enhance the unique cultural, recreational, and agricultural values of the California Delta as an evolving place, an action critical to achieving the co-equal goals, is very useful. The strategies developed by the DVSP should apply here. Scenarios that include development of additional conveyance facilities and habitat restoration should also be woven into the recommendations so all potential eventualities are adequately identified, evaluated and planned for. Greater detail

regarding the DVSP is in Chapter 3, but this information is important in establishing the theme and baseline of this report.

## Chapter 2

- The end of this chapter should provide a summary of what demographic and economic conditions and trends point to as the prospects for Delta communities without any change in the next 10, 20 or 50 years. The reader should be given some indication of what these key findings mean for this region and its economy without specific intervention based on State and Federal proposals and this information should be woven into support for an Economic Sustainability Plan for the Delta.
- This chapter should include what happens between now and the implementation of the Bay Delta Conservation Plan (BDCP). It should discuss what will happen if subventions funds are released or the outcome if this funding dries up in 2013. In this interim period there should be no further degradation of project levees as a result of neglect. This plan should include recommendations for a Delta-wide assessment of what is needed to fully fund and address mosquito abatement and other invasive species threats to this region. It would be most helpful if this type information is this broken down by County.

## Chapter 3

- This chapter should include identification of overlaps in governance for the Delta and recommendations to address these. Implications of water-related federal plans or regulations (such as the Clean Water Act) should also be included in this chapter.
- The conclusion should include those plans that will have the greatest potential impact on the economic sustainability of the Delta, by either recommending that resources flow into the Delta or by restricting opportunities for this region to increase its viability.
- The individual County General Plans are highlighted in this chapter and the conclusion should state the importance of every County receiving an individual analysis of what is necessary to improve its ability to be economically sustainable over time despite the impacts of varied potential region-specific scenarios related to State and Federal plans.

## Chapter 4

- In discussing levee improvements, all information should be strictly factual and leave no room to be categorized as conjecture to avoid unnecessarily prejudicing any California interests against this report.
- Add "improved navigation and habitat" to the second sentence on page 42.

- The last sentence in first paragraph on page 42 does not present the State's view.
- The section on page 42 that says "Subtracting from the total the urban levees and levees in the north and south Delta that are primarily flood-control levees leaves around 650 miles of core levees..." Tries to create a new class of delta levees, "core levees," and essentially ignores the remaining without providing a clear explanation of why this should be the case. The report then makes the case that these core levees are the only ones that need state and local O&M. This is harmful to Solano County interests.
- The section on page 42 that says "The remaining approximately 460 miles of core levees need to be maintained and enhanced by the State and the local reclamation districts" leaves out all Solano County levees except Ryer Island, and this is not acceptable.
- The third paragraph on page 42 refers to "funds current in the pipeline" and seems to infer that these bond funds are secure, when in actuality, they are not. It appears that we are not on track to get this level of funding before P 84 and 1E authorizations expire. DWR has spent an increasing share of these monies for internal operators, staffing and ongoing projects, some outlined later in this document.
- The second line on page 43 says, "...also would allow for planting vegetation on the water side of the levees..." this is not applicable on project levees. Line five says "...allow the construction of new tourist and recreational facilities out of the statutory floodplain." Facilities on levees should not be considered out of the floodplain—maybe above the floodplain, but not out of the floodplain.
- The first paragraph on page 43, fourth line, refers to "project levees, built by..." This should say "build or improved by...most project levees pre-dated the 1917 Sacramento and San Joaquin River flood control projects. The Corps improved many of those – it's a stretch to say they built them.
- In reference to the table on Page 45, what is the distinction intended by the "Core" levee designation? This does not square with the current Delta Levees Maintenance Program. The concept is onerous on its face.
- The first paragraph on page 50 says "Even without survey measurements...shown in Appendix B." This needs more than anecdotal evidence. It also does not address issues related to stability and foundation conditions. The next paragraph refers to "dry-land levees." This term should be defined. Is this another subdivision of Delta levees similar to "core" levees? Again, what is the purpose here other than to define certain levees that would not be supported by the state?
- Last paragraph on page 50 says "Project levees were constructed..." should add "or improved."
- Top of page 51 says "These levees were build..." should add "and maintained." The next paragraph, third line says "further development...conditions..." Please strike "conditions" and add "opportunities."
- The entire third paragraph on page 51 needs clarification. Paterno dealt with project levees, the Central Valley Flood Protection Plan (CVFPP) deals with project levees (with recommendation for



other levees to be included if warranted). Does this paragraph address project only or both project and non-project?

- The point of the first paragraph in the summary on page 53 is unclear. There seems to be an assumption that project and urban levees are maintained by someone other than the local Reclamation District or State. Please clarify. Also at the end of this paragraph, how is the calculation of 136 miles of restricted height levees substantiated?
- The next paragraph, ninth line refers to “difference mechanisms for dealing with this issue.” What are these mechanisms if they are not the Delta Subventions Program and federal disaster assistance? The last sentence of this paragraph seems to suggest that flood control levees don’t protect the economics and Delta as a place. That would imply that flooding the Cache Slough levee protected lands will not affect water quality, and that is absolutely incorrect. This last sentence is incorrect and should be removed.
- The paragraph on page 55 seems totally out of place and is only peripherally relevant to this chapter. This should be removed.
- On page 56, it is our understanding that the Hazard Mitigation Plan (HMP) was intended to be an interim standard that preserved federal disaster assistance eligibility for areas committed to attaining the relevant PL 84-99 criteria, not a longer-term standard. The second paragraph on this page describes the PL 84-99 as a short-term goal—is this better described as a near-term goal? Short-term implies there is something beyond that is an improvement. For most agricultural settings, PL 84-99 is likely the best they can afford and certainly the best the State will advocate for. This is an area that the DPC should discuss in relation to the level of protection that is appropriate to specific land uses. The Sacramento Valley flood agencies are advocating for risk-based standards that incorporate different standards for urban, small community urban and agricultural land uses.
- The top of page 58 refers to Urban Levee Design Criteria (ULDC) vegetation language. The description here is too vague. It appears the existing criteria allows no vegetation on the structural levee cross section, but rather on the residual waterside levee berm and slope in the event that the levee is setback to create a new (presumed) waterside slope that is actually buried within the old levee cross section, as with the new North Natomas levees. Alternatively, a widened berm is constructed that allows vegetation beyond the prescribed 15 foot clearance at the waterside toe of the levee. This entire issue is presently being negotiated.
- The top of page 60 says “...levees would also allow for the construction of new recreational and tourist facilities out of the flood plain.” Does this assume an on-levee facility? See previous comments regarding floodplain.
- Section 3.3.2—A lot of good levee language was negotiated in the CALFED process – but that was at a time when we were all going to “get better together.” The principle drivers in that discussion, then as today, were the export agencies, and they nor the State support that level of investment in the Delta today, although they should.

- The top paragraph on page 66 says “For example, if, as opposed to spending \$2 million per mile...emergency preparedness?” This example needs to be clarified—a drain—for what purpose? The whole paragraph is a bit unclear as to its intent.
- The first paragraph on page 67 says “There is normally a few days to a few weeks warning of flood events.” This paragraph is opinion and no one should use this as the basis for planning or determining a flood response. Events such as overtopping and even wind driven erosion and overtopping may allow a response if the anticipated failure is recognized soon enough. Other issues such as structural failure due to a variety of causes such as slips, slumping, burrowing animals, physical damage can occur with or without warning or sufficient time to organize a response. Water elevations in river segments and bypasses can rise in very short time frames. Emergency preparedness does not require an economic justification, it is a precondition of any effective public safety effort, and is a moral obligation as well.
- The second bullet on page 67 talks about creating stockpiles of appropriate materials to deal with enhanced seepage. This requires a significant number of correct assumptions (guesses) be in place for a timely and effective deployment of those materials and resources for a successful intervention. This is not to say that this is not helpful, but it would be too easy to assume that because there is a stockpile that it can be effectively deployed. Neither the state nor local agencies have the waterborne resources to move material. This is available through contractor, who in a flood emergency are very likely using their barges and tugs to move out their commercial material loads to paying customers and are somewhat disinclined to contract their capacity to move public materials for the price of drayage. Without a complete state/local turnkey capability, significant sunk investments in resources could be underutilized when they are needed most.
- At the top of page 68 it speaks of a permanent emergency response fund of \$50-150 million being established. Will having a large local/state fund available for ready use in an emergency effectively delay deployment of federal resources? The feds typically require the expenditure of all local resources before federal dollars are committed. In the event that there are other emergency responses, will those federal assets be committed to other locales before Delta funds are exhausted?
- The last sentence of the first paragraph on page 68 refers to MWD pursuing the second alternative in association with the State Water Contractors and DWR using funds from Props 84 and 1E. These are actions that protect through-Delta conveyance and are not flood protection efforts. These prepositioned resources are, in fact, not available for levee repairs. All of these funds should come from the conveyance portions of the Propositions.
- The second paragraph on page 69 says that the Delta Levees Maintenance Subventions Program provides financial assistance to local levee-maintaining agencies for the maintenance and rehabilitation of non-project levees. Please adjust this to indicate that the program supports both project and non-project levees in the Delta and Suisun Marsh.
- The fourth sentence in the third paragraph on page 69 says “This program initially focused...extended to the rest of the Delta.” Please add “and the Suisun Marsh (AB 360) to the end of the sentence.

- The first sentence on the second paragraph on page 71 says the total investment in Delta levees since these programs began will be \$698 million plus—plus what?
- The second paragraph on page 72 says the “Improvement of critical non-project and non-urban levees to a higher Delta specific standard that will provide 200-year plus protection...” This appears unlikely, particularly in areas not subject to the 200 year urban standard. The state is concerned about exceeding the FEMA 100 year standard and encouraging new development that would potentially increase liability exposure. The third sentence in this paragraph discusses planting on the water side. This should not be suggested unless someone other than local interests are going to pay the bill. The Delta Stewardship Council is not currently planning any projects, just policy and recommendations. This paragraph also references dredging. Please note that dredging will be an extremely valuable tool for flood risk reduction in the Delta. This paragraph says “These figures also assume that design and construction are executed...by a factor of as much as 2 or 3.” This is an important point as locally managed projects are much more cost effective than state or federal projects.
- The third paragraph on page 73 speaks of a single agency responsible for flood-fighting and emergency response following earthquakes. This concept of a centralized agency would require the 5 county emergency response agencies to fully engage with local reclamation districts in planning efforts, particularly given the poor track record here because of a lack of coordination among agencies with responsibility and those with expertise in flood fighting.
- The last paragraph on page 73 references three potential sources of funding from within the Delta for maintenance. The third source is listed as “the agencies that convey water through the Delta.” The State Levee Subvention Program was intended to cover this larger statewide interest/use/impact of/on levees in the Delta, this included the use of Delta channels for conveyance.
- The chapter proposes to divert the subvention funding for a select group of interior islands, and categorizes the remaining levied areas as not essential to the economic well being of the Delta. This section should provide supporting analysis to explain how it arrives at this conclusion.

The focus on the “core” levee concept created in this chapter is troubling. These are not defined but appear to be concentrated in the subsided portions of the delta in the central and southern delta. In its entirety it takes a view that levees for maintaining water quality are the principle economic driver in the discussion, while not highlighting the importance of flood control levees to “Delta as a place.”

The authors appear to be less than supportive of the remaining levees with either the statement that 1) there is another mechanism, but unidentified mechanism, or 2) don’t require State or Reclamation District maintenance.

The chapter is largely a recitation of ongoing processes in the Delta. It would be more helpful if it outlined a plan for levees and flood control. The rest of the levees in the Delta should be supported by this study, particularly since there it is unlikely that all of the presumed available Prop 84 & 1E bond funds remain.

## Chapter 5

- It would be helpful to have the formula used to come up with preliminary cost estimates shown on page 78, under Habitat Conservation Scenarios, Tidal Habitat Restoration, in bullet 3. References to studies such as those referred to in the first paragraph on Page 80 should be included.
- On page 80 under Increased Land Use Regulation, it would be helpful to have an illustration of an actual cost calculation that would change if the sited restrictions became law, so the lay reader would understand the increased cost.

## Chapter 6

- Table 8 on page 87 and Table 10 on page 92 should both have total lines.
- On page 95, under Section 4.1 starts discussing salinity impacts of isolated conveyance facilities. There should be a discussion in lay terms of why it is determined that salinity is an issue and how this can be verified. In the first sentence under 4.1.1 it says that salinity data has been collected in 50 locations. This should include information regarding who performed this data collection.
- It would be helpful to have a list of all the Relevant Conservation Measures written out before Table 14, on page 99, so it won't be necessary to look through pages to understand what is being referenced. Lastly, what is the total on Table 16, page 103, for revenue per acre (2009)?
- Page 103 of this report discusses BDCP potential projects and its economic impact to agriculture. Environmentalists say that habitat projects have an economic value to society that should be reflected in any economic analysis, but this report does not include this. This should be part of this report's recommended follow-up along with a rigorous analysis of habitat projects that includes a determination of the quantified benefit (in dollars) of each project. Follow-up to this report should also include a peer-reviewed analysis of negative impacts to local agriculture and the local economy from crop conversion and any other pertinent source along with positive impacts to recreation, construction work, the environment and any other segment of the region that would provide the public with a broader, more credible, understanding of the underpinnings on the Delta region.

## Chapter 7

- Page 111, bullet 3 says "Assuming that current visitor spending patterns remain unchanged and Delta business growth accommodates recreate-related spending increases, baseline visitation growth is estimated to increase spending in the Delta roughly \$78 million (2011\$) to about \$329 million (2011\$) by 2050. It would be helpful to have the formula used for this calculation.

- It would be helpful to have a conclusion or summary of what the data in this chapter means.

## Chapter 8

- This chapter should also include information on technological infrastructure necessary to bring full Internet access to the region. This adds the potential for additional white collar jobs and businesses and enhances the ability of blue collar jobs to remain technologically current. If there are some areas that require more access, this should be highlighted. Assuming there are libraries in the key communities, these should all have Internet access, thus allowing the full community an opportunity to communicate with the outside world.
- In regards to transportation corridors, roads, highways and shipping channels are vital to inter and intra-County mobility, public safety, a healthy business climate, recreation and agricultural vitality throughout the Delta. For example, Highway 12 supports commerce, emergency response and circulation through three Delta counties.
- Changes to Delta water delivery system operations will require these areas receive a reliable water supply, both in terms of quantity and quality. For example, in Solano County the major cities in the county (and Napa County) receive water from the State Water Project (SWP) through the North Bay Aqueduct (NBA). The pumping plant intake to the NBA is located in a slough in eastern Solano County. Additionally, tens of thousands of acres in eastern Solano County are wholly dependent on Delta water supplies for agricultural uses. All the recent Delta studies suggest these agricultural areas in eastern Solano County as prime candidate lands for habitat restoration for the benefit of threatened and endangered species that are in decline in the Delta. However, creating environments for threatened and endangered species to thrive so close to critical water supplies for the County will only increase operating difficulties for urban water suppliers and threaten a critical mass of Solano agriculture in the immediate future. Alternatives need to include solutions that protect the continued operation and financial viability of the NBA, agricultural intakes in the northwest Delta and the managed wetlands in the Suisun Marsh.
- To maintain economic sustainability in the Delta, area-of-origin water rights must be maintained and protected. This is a less-tangible type infrastructure that supports Delta viability. Proposals to realign and modify these protections and priorities have the potential to cause serious social and economic damage to Delta communities.
- This report should also address the human infrastructure of the Delta and how community and business needs must be included in any calculations of resources necessary to ensure the improvement and ongoing sustainability of this region. Are there adequate educational resources or adolescent activities or senior facilities or do such need to be developed as part of this plan?

### Chapter 9

- It would be helpful to have a conclusion or summary of what the data in this chapter means along with a visual depiction of the data.

### Chapter 10

- Page 170, talks about four potential sources of significant changes in Delta water quality—what about water quantity in this context? On the last paragraph on this page there is a discussion about the impact on South Delta water quality—there should be an explanation of why the impacts cannot be positive. Also any references to information from BDCP should include citations. However, the example of the proposed Lower San Joaquin Bypass project is helpful.
- Due to the complexity of services provided within each County (including reclamation, school, special and resource conservation districts within each county), the ESP team should recommend that each County receive a complete individual analysis of services that are or should be provided in the Delta that includes a clear recommendation for how these activities can be fully funded in support of regional economic sustainability.

### Chapter 11

- This chapter makes the case for developing a master planning type approach to the Delta that takes into consideration the unique characteristics and needs of the individual Legacy communities and provides an over-arching vision and consistent follow-up actions to make sure the Legislative mandate is supports the sustainability of Delta communities and business interests. There should be a comprehensive analysis and plan that links lodging, entertainment and retail options in a logical way to fund infrastructure improvements. A comprehensive, well-thought out pragmatic plan that is adequately marketed would have a much better chance of receiving financial support from the private sector. Anything less will make the likelihood of ongoing improvement and success over time extremely unlikely.
- The implementation portion of this chapter recommends that a “Facilitator Organization” should manage economic sustainability efforts in the Primary Zone. A master planning type process or arrangement could be orchestrated by such Facilitator Organization that could then work to implement the recommendations resulting from this process.
- The case study on page 202 is helpful.
- Section 3.1 Water Conveyance, the report states that “Reductions in agricultural output could have serious consequences for employment and wealth creation in these communities.” Examples should be given of potential impacts and how these should be moderated or mitigated, where appropriate. This section further discusses potential impacts of conveyance facilities and how exact impacts are unknown. This makes it more important that local government is intimately involved in every step of these processes that directly impact the economic sustainability of their jurisdictions.

- Section 3.3 Levee Scenarios should include a well-documented statement of the statewide benefits of Delta flood protection.
- Regulatory Scenario 2 should specify which areas need to have an easing of regulatory oversight. This section should also include required community infrastructure such as schools, libraries and stores.
- The first sentence in the first bullet under Conclusion should be reworded slightly as follows: "Agriculture is the main economic driver of the Legacy communities and should continue to be for the foreseeable future."
- Agri-tourism should be included in the glossary.
- This chapter makes a clear case for a master planning type process that would pull the area together and establish a plan everyone could live with.

## Chapter 12

- This chapter should point back to the report's theme and layer key findings and recommendations accordingly. (Recommended theme may be something like "establishing a framework that ensures the environmental, financial, socio-economic, transportation and technological improvement and future viability of the Delta.")
- Triggers should be included so if certain plans go forward, specific information will be importance and studies will follow to gather and publish the necessary data.
- Overview of the People and Economy of the Delta should highlight that the demand for public services will increase if the Delta becomes a destination. Local government and the state must work together to ensure the Delta region maintains and improves its aesthetic quality. The Delta should improve and the state should work with local government to makes sure the region benefits from any changes it experiences. Overall improvement to the Delta would greatly improve the credibility of the State.
- The section regarding population growth should specify if the strategy is to replenish the population. It should also make the case for infrastructure to support any future growth.
- Use of the term "stagnated" in the last bullet on page 227 is a very negative and misleading term. It assumes that a lack of people growth is a negative factor although public and social policies have discouraged rapid urbanization of the region.

- The third bullet on page 228 says “Employment growth in the Primary Zone has not kept pace with the surrounding region.” This is probably understated as to the economic value it brings to the region. It certainly is an issue to promote.
- The fifth bullet on page 228 says “The Delta economy is highly export oriented, bringing new money into the region instead of recirculating existing income.” This is an inappropriate comparison as it implies a failure of the region to keep pace.
- The fourth bullet on page 229 says “Development pressure has influenced regional planning in the rural Delta.” This should have included a statement outlining a connection with population growth.
- The section regarding the DPC establishing a framework for State influence over Delta land use planning and decision making should commit the state to supporting development of a framework that fully supports the economic sustainability of the Delta over time.
- The first bullet on page 234 says “Recreation—related economic activity in the Primary Zone has been relatively flat over the past 20 years.” Again, “relatively flat” is negative when it actually means “relatively stable” which is positive. Is this because the nature of these businesses do not constitute a heavy labor demand?
- Page 235, Infrastructure, the second bullet regarding water resources originating from the Delta should also include a discussion of water quantity. This paragraph should be explained and substantiated so that a lay person could understand this information.
- The second bullet on page 237 says “Transportation-related improvements would enhance the visual landscape, attract visitors, and improve public safety.” This would also enhance the capacity of the Delta region to grow its economy. The manufacturing firms require the ability to get products in and out.
- The fourth bullet on page 237 says “A strict and multi-layered regulatory framework limits economic development.” Although this statement is true and it is assumed that this is the reason a “Facilitator Organization” is recommended, it should be remembered that this may create a double-edged sword.
- The third bullet on page 238 says “A “Facilitator Organization” should manage economic sustainability efforts in the Primary Zone.” There is no apparent discussion on who “owns” this new organization. Conceptually, this sounds acceptable, but this depends on the owners and its perspective.
- At the end of the chapter there should be a short final comment regarding ensuring the sustainability of the Delta.



### Chapter 13

- The first paragraph should address the structures and supports that are necessary to maintain and improve these areas and ensure their resiliency.
- Recommend that the Three Key Issues be changed to Principles.
- Page 241, second bullet refers to a cap that must be established. Each County should receive an individual analysis of their agricultural production tolerance to loss. This would greatly assist in establishing a reasonable cap for Delta agricultural losses.
- The seventh bullet on page 242 says "Create flood bypass and habitat improvements..." Solano County agrees with Yolo County that this wording should be changed to "Explore flood bypass and habitat improvements in the Yolo Bypass, near the confluence of the Mokelumne and Consumnes River..." Yolo County wisely recommends close engagement of local stakeholders in this very important process.
- Page 243 refers to a Facilitator Organization to manage economic sustainability effort. What expertise would be necessary to ensure sound and transparent program development, implementation and ongoing management? How would this function be audited?
- The report should include a discussion of various industries and their potential in this region. There may be a potential beneficial use in growing algae as a fuel. What about solar or wind farms? What other innovative opportunities should this region explore that could add value to the Delta over time and enhance its economic sustainability?

### **Additional Items that Need Substantiation**

Page 170, paragraph 5 “...so that the impact on South Delta water quality is uncertain, but it cannot be positive.”—how is this comment substantiated?

Page 171, top paragraph. “The second kind of conservation measure that is included in BDCP...” citation please.

Page 171, first full paragraph (3) “The third possible source of significant changes in Delta water quality...these effects can be mitigated by adaptive management and engineering, primarily by restricting the tidal flows into the Delta by narrowing the channels in the Western Delta”—how is this comment substantiated?

Page 172, 4.1.2 “...the upgrades will cost the typical household in the Delta counties \$200 or more per year when fully operational compared to secondary treatment...” what is basis for this calculation?

Page 230, the last two bullets need citations.

Page 231, the first bullet needs a citation.

Page 232, the first paragraph under the Agriculture heading needs a citation.

Page 233, how is the information in the second bullet substantiated?

Page 239, paragraph four needs to include a citation.

Page 240, what formula is used to make the calculation at the top of this page? Similarly, for paragraph three on the same page, how is the statement “only about 50 miles clearly fall below REMA’s Hazard Mitigation (HMP) “standard” and 100 miles or more...” substantiated?

## **Federal/State Agency Consultation with Counties and Local Agencies**

Achieving the co-equal goals of the Delta Plan will necessitate changes in today's Delta fabric. The thousands of acres of land slated for conversion to habitat projects will potentially take out of production very fertile agricultural lands and will impact existing Delta communities and underlying economics of the region. Careful and coordinated planning and engagement with the Delta communities and the local governmental entities that support those communities could reduce impacts and further the Plan's objectives. Accordingly, the following procedures shall be followed as habitat projects are contemplated and initiated.

### *Pre-project Master Planning*

A conceptual Habitat Restoration Master Plan and Policy Framework shall be prepared by the proponent agency for each County within the legal Delta prior to initiation of any habitat restoration project within an affected County jurisdiction. Plan preparation shall include early formal consultation with County agencies (counties will coordinate outreach with local communities and special districts). The conceptual plan shall consider:

- Habitat patterns that protect prime farmlands for continued agricultural use and reasonable agricultural operations. Every effort should be made to avoid fragmenting viable agricultural areas and disrupting access to key agricultural infrastructure.
- Impacts on county circulation network and emergency response capabilities.
- Impacts on flood control and levee networks.
- Impacts on the social and economic fabric of established Delta communities. Retention of existing communities and their underlying viability shall be a key consideration.
- Impact on local water diversions and conveyance systems.
- Other local issues and considerations as identified during the consultation process.

### *Review of Specific Habitat Projects*

Prior to initiation of any habitat project, the affected county and other affected local entities (i.e. special districts, etc.) shall be consulted for review of detailed plans and support documentation. Project plans shall be reviewed for consistency with the countywide conceptual Master Plan and other local planning documents such as the County General Plan. Every effort shall be made to establish a pre-project agreement with the affected county or local agency that addresses how the co-equal goals of the

Delta Plan can be met while minimizing impacts on the local county or agency. Absent an agreement, the following, as applicable, must be initiated and addressed:

- Mitigation for farmlands lost due to conversion to habitat projects per standards established in local ordinances.
- Preparation of an economic analysis to qualify impacts to the local economy including fiscal impacts to local government. If impacts are identified, a funding commitment would be required and a funding source identified to fully compensate local government and communities for the identified impacts including, but limited to, loss of property and sales taxes. The economic analysis must also consider third party impacts and potential additional public safety costs caused by increased public access and recreational activities in restored wetland areas.
- Relief from future restrictions or conditions on urban discharge and runoff due to the existence of new habitat.
- Extend ESA take protections to existing agricultural operations and runoff so as to avoid potential restrictions resulting from the introduction of rare or endangered species in newly created habitat areas.
- A hydrologic and hydraulic analysis of possible short term and cumulative impacts on the flood control system caused by proposed habitat restoration projects. Any impacts should be mitigated so as not to harm the integrity of the existing flood control system and local properties in the vicinity. Funds shall be provided to ensure system is retained or restored to design level or higher.
- Identification and commitment of funds for long- term maintenance of habitat restoration area.
- Identification and commitment of funds for long term maintenance of levees in the vicinity of a habitat restoration project including funds for reinforcing levees needing upgrade to compensate for project impacts that might otherwise compromise the integrity of the existing system.
- Development of a public outreach program to ensure Delta communities are advised and fully aware of changes that will impact them.
- Other measures necessary to mitigate local impacts while ensuring the co-equal goals of the Delta Plan are met.

## **Solano County Facts**

- The two significant portions of Solano County that are targeted for habitat restoration are Cache Slough and the Suisun Marsh.
- Of the 23,000 acres in Cache Slough that were being considered for habitat restoration, 14,500 acres are in agriculture production.
- Eight thousand acres (of the 23,000 acres referenced above) may be converted under the U.S. Fish & Wildlife Service (USFWS) Operation Criteria and Plan (OCAP) biological opinion.
- The value in 2006 of Agriculture Production of the 14,500 acres was \$7.5 million. In addition, there was about \$3.1 million in hunting related expenditures.
- Suisun Marsh containing 116,000 acres, is the largest contiguous brackish water marsh remaining on the west coast of the United States. For many years, Solano County has promoted sound land stewardship policies and practices in the Marsh.
- The Marsh provides essential habitat for more than 221 bird species, 45 animal species, 16 different reptilian and amphibian species, and more than 40 fish species.
- Solano County has a long record of protecting farmland in the Delta and other county agriculture areas. Urban development cannot be proposed in areas designated agricultural on the General Plan unless approved by voters in the county. There is no significant urban development on Delta land in unincorporated Solano County.

## **Solano County Supports**

- The co-equal goals articulated in the draft Delta Plan if they truly result in balanced Statewide and Delta water planning actions.
- Provision of adequate freshwater flows (based on objective and well vetted scientific studies) through the Delta, with clear minimum flow requirements and protections during periods of drought.
- Comprehensive and objective analysis of an appropriately sized conveyance system and alternatives. Sizing should not exceed what is reasonably necessary so as to minimize cost to California citizens and to provide the

appropriate balance between the land necessary for implementation of the water project and retention of vital and sustainable agricultural activities in the Delta region.

- Not rushing the Delta planning process just to meet statutory deadlines. There is simply too much at stake locally and statewide to make expedient decisions lacking the support of comprehensive analysis.
- Acknowledgement by the Federal and State Agencies of local government and communities in Delta areas as partners in Delta planning efforts with a well defined and meaningful role in the process.
- Recognition of the inherently sustainable nature of agriculture in the Delta due to rich soil conditions and excellent growing climate. Any Delta water project environmental analysis should consider and analyze the sustainable benefits of farming Delta lands versus the costs of shipping water to regions where farming is more resource intensive due to less favorable weather and soil conditions.
- Incorporation of clear and unequivocal provisions in various Delta Plans and agreements acknowledging the potential impacts to local Delta Communities, including establishment of processes for consultations with local agencies and full mitigation of identified impacts. The process should be established in the Delta Plan currently by the Delta Stewardship Council, with specific implementation terms memorialized by a Memorandum of Understanding between the County and State/Federal water agencies and their contractors
- Master Planning of proposed habitat areas for each affected county prior to initiation of individual habitat projects. The goal of Master Planning would be to comprehensively evaluate how habitat areas can be sited in a compatible way with agriculture and existing land uses to minimize overall conversion of viable agricultural lands.
- Preparation of an economic analysis for each County prior to initiation of habitat projects. The economic analysis shall be utilized to determine the full range of primary and secondary environmental impacts and to provide a clear basis for full mitigation of those impacts

## **Specific Solano County Objectives**

- **Full Mitigation for economic, social, public safety, and service impacts** of conversion of agricultural and other lands for habitat restoration purposes. Mitigation to be considered would include:
  - In lieu payments for lost property tax revenue to the County.
  - Payment of third party impacts.
  - Financial support to local agencies for staff required for Delta Planning efforts.
  - Mitigation funds to facilitate acquisition of farmland for permanent preservation (fee title or easement) at a ratio of 1.5 acres per acre converted as required by the County General Plan.
- **Protect Integrity of Levee and Flood Control System.** Introduction of habitat to restoration areas may impact the hydrology and hydraulics of an area and could be detrimental to nearby agricultural operations and other land uses. Detailed engineering analysis is necessary and appropriate mitigation must be in place to ensure the overall system is not compromised.
- **Provide adequate funding for levee maintenance.** This funding must address short and long term needs and be from a reliable source.
- **Assurance that there will be long term financial support** from Federal/State Agencies for long and short term maintenance and service obligations (including public safety) in habitat restoration areas.
- **Relief from potential future urban runoff or discharge requirements** resulting from the establishment of habitat restoration areas.
- **Extend ESA take protections** to existing agricultural operations and runoff so as to avoid potential restrictions resulting from re-introduction of rare or endangered species in newly created habitat areas.
- **Full Federal/State funding for fish screens and other environmental mitigation requirements** that might be required for local agricultural water diversions and related reclamation activities.
- **Support to manage impacts of habitat restoration over the long term.** Develop a County led effort that is sanctioned by the federal and state

government to ensure that ongoing monitoring and analysis is conducted on any habitat restoration area. Policies will be developed to determine specific remedies for detrimental impacts.

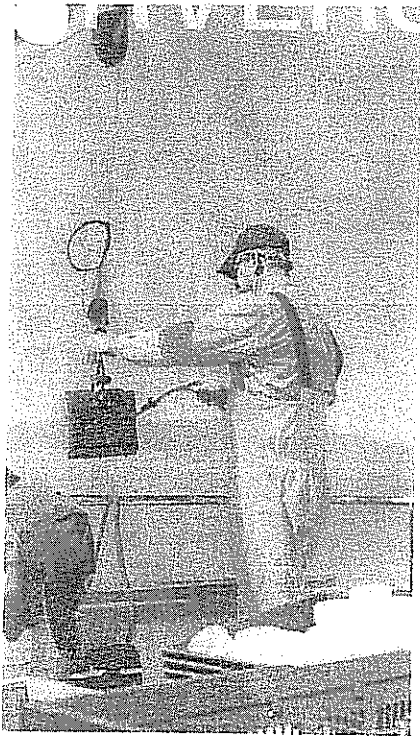
### **Specific Funding Requests**

- Funding for a Cache Slough Restoration Opportunity Area Study—including \$15K in staff support to facilitate Requests for Proposals, reviews of drafts and consultant selection.
- A stipend of \$250K annually to participate in Delta Planning and other related activities. Funding would be used at Solano County's discretion to provide staffing for meetings and other involvement deemed appropriate.
- Funding for the study of economic, environmental, and ongoing evaluation of adaptive management in any Restoration Opportunity Areas identified for habitat restoration by the BDCP or as the result of the implementation of the Biological Opinions.
- Recognition that the Delta has Area-of-Origin rights and protection against fees that categorize Solano County inappropriately as a “beneficiary” of certain changes imposed by the export community.

### **Public Process Requests**

- A transparent public process including regular media updates and community meetings for Solano County residents to ensure they are aware of all proposed changes along with any impacts. Public information should be available in English and Spanish.
- If a water fee is proposed, the public should know what it is for, and everyone should be able to monitor its use and related progress on any related projects or programs. An extensive public education process should accompany the initiation of any water fee proposal.





*The Rio Vista Estuarine Research Station (RVERS) is a proposed State office facility that would be constructed on the decommissioned City of Rio Vista Army Base*

# RIO VISTA ESTUARINE RESEARCH STATION

## Introduction

The Rio Vista Estuarine Research Station (RVERS) is a proposed State office facility that would be constructed on the decommissioned City of Rio Vista Army Base. The proposed facility would consolidate over 160 agency employees (Department of Fish and Game, U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, and Department of Water Resources) in the Interagency Ecological Program (IEP) into one riverfront location. The project will be designed to integrate into the City of Rio Vista's Army Base redevelopment project that includes a proposed Delta Interpretive Center, and a U.S. Fish and Wildlife Service refuge for the threatened delta smelt.

Benefits of the project include a reduction in IEP operations costs over the life of the project and economic stimulus for Rio Vista and the surrounding Delta. In addition, the new center would provide a focus for threatened fish research and conservation, resulting in improved science to reduce the economic costs of managing delta smelt and other fishes.

## Project Authorization

- Project has been approved by State of California Department of Finance.
- State Water Contractor's support the State's share of RVERS cost.
- The USFWS Fish Technology Center and delta smelt refuge in Rio Vista are included in President's Interim Federal Action Plan for the California Bay-Delta (Dec. 22, 2009).

## State Programmatic Requirements

The program requires approximately 10 acres and buildings of 107,0000 square feet to accommodate:

- Office and work space for approximately 160 employees
- Wet & dry laboratories
- Lab chemical storage facility
- Warehouse storage for lab samples and field equipment with staging areas
- Boat storage
- Vehicle and boat repair shop
- Open field experiment yard
- Wet slips with docks and boat ramp



## RIO VISTA ESTUARINE RESEARCH STATION

### City of Rio Vista

The City of Rio Vista took ownership of the former US Army Reserve Center in 2003 and plans to redevelop the historic 28-acre waterfront site with a mix of public and commercial recreational uses, including:

- Delta scientific research facilities
- Delta Ecology Center to interpret delta fisheries and natural and cultural resources
- Delta Discovery Park, picnic area and trail
- Ancillary recreation-serving retail
- Community-serving recreation facilities

### Project Planning

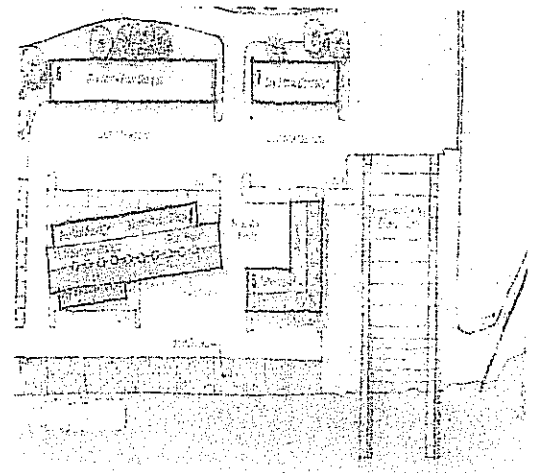
- MOU's with DWR and USFWS (current)
- Rio Vista Army Base Redevelopment Project Plan (2010)
- Rio Vista Army Base Redevelopment Plan EIR (2011)
- Army Environmental Assessment and Finding of Suitability to Transfer (2002)
- Local Reuse Plan and General Plan (2001)

### Project Goals

1. Sustainable "green" development that respects unique waterfront location
2. Mixed public-private recreational uses
3. Enhance site aesthetics and environment
4. Community, regional, state and federal partnerships
5. Delta research and education cluster
6. Community economic benefits



*Field studies in the Delta*



*Conceptual site plan  
Science Research Center/Field Station  
- by WARE MALCOMB*

## **Rio Vista Estuarine Research Station (RVERS) Fact Sheet**

*Draft June 3, 2011*

### **What is RVERS?**

- “RVERS” is *Rio Vista Estuarine Research Station*, a proposed scientific field station to be constructed on the decommissioned City of Rio Vista Army Base.
- The project would house the Interagency Ecological Program (IEP), a consortium of nine state and federal agencies that has conducted much of the aquatic monitoring in the Delta over the past 40 years.

### **Who would work at RVERS?**

- RVERS would consolidate over 160 agency employees into one location.
- Most staff would be from US Fish and Wildlife Service and California Department of Fish and Game, with additional staff from US Bureau of Reclamation and California Department of Water Resources.
- The majority of the staff would be field biologists and laboratory assistants--there would be substantial support from engineers, technicians, computer scientists & office staff.

### **What are the project details?**

- The current design requires approximately 10 acres total.
- A total of 107,000 square feet is required for operations including:  
Office space: 13,000 square feet      Boat storage: 38,000 square feet  
Laboratories: 7,600 square feet      Shop: 18,000 square feet  
Warehouse & storage: 25,000 square feet.
- In addition, RVERS will feature will include conference rooms, employee break rooms, a computer room, a locker room, and a reception area.
- Additional needs include:
  - Boat ramp and dock with slips (~16 boats).
  - Parking for office vehicles (46), employees (78), and the public (37).

### **What are the linkages between RVERS and proposed hatchery in the region?**

- RVERS is being planned in conjunction with a proposed USFWS Regional Fish Technology Center, a 15-20 acre facility that will include a delta smelt hatchery.
- The combination of the two projects will create a regional center for the conservation and study of delta smelt and other native fishes.

### **Why is Rio Vista the best location?**

- A detailed study by the State of California identified Rio Vista as the best alternative for RVERS because it is centrally-located, has waterfront access, is an ideal property (decommissioned Army Base), and has low risk of damage from floods or earthquakes.

### **How would RVERS help address the current Delta crisis?**

- Improved science should reduce the extreme economic costs of managing delta smelt and other fishes.

- The delta smelt refuge and the Rio Vista facility are included in President's *Interim Federal Action Plan for the California Bay-Delta* (Dec. 22, 2009).
- This type of science and conservation is critical for a Delta solution.

#### **Why do the agencies support RVERS?**

- RVERS would reduce IEP operations costs over 20-25 years.
- Current IEP facilities are substandard and agencies not co-located, hindering the ability to do good collaborative science.

#### **Who else supports RVERS?**

- Unlike many other controversial issues in the region, this project is widely supported by local universities, water users, and environmental groups.

#### **How would RVERS help the local community?**

- The project would bring a large number of professional jobs to the region.
- RVERS is being designed to integrate with the proposed City of Rio Vista Delta Interpretive Center.
- Partnerships between RVERS and local schools are likely (e.g. internships).
- RVERS, refuge and proposed interpretive center would generate substantial public interest, helping to improve Rio Vista's standing as a regional center for Delta issues.

#### **How much would the project cost?**

- The estimate for RVERS is \$76 million.
- The project is currently planned as a *Lease-to-Own* project, where the RVERS would be built by a private developer, but the State would own the facilities after 20-25 years.
- Under the Lease-to-Own plan, \$11 million of the total cost would be needed as a one-time initial cost. The remainder of the costs would be incurred as part of an annual lease.

#### **How would RVERS be funded?**

- The Lease-To-Own option has been approved by California Department of Finance.
- The State Water Contractors support the State's share of RVERS.
- Funding for the Federal share remains to be secured. Options include Federal support for initial increase in yearly operations costs; or an appropriation to "capitalize" the Federal portion of the project (e.g. \$30 million).

#### **How might future water planning affect RVERS?**

- Efforts such as the Bay Delta Conservation Plan and the Delta Stewardship Council's Delta Plan could substantially increase research and monitoring needs in the Delta.
- Hence, additional facilities and staffing are expected in the future.

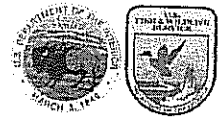
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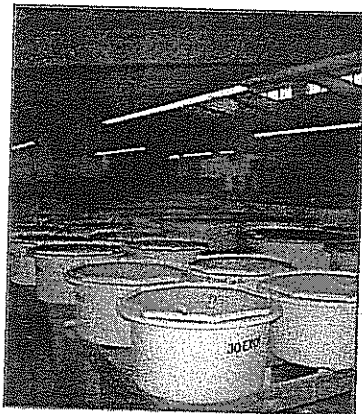
# Rio Vista Fish Technology Center

## *Pacific Southwest Region*

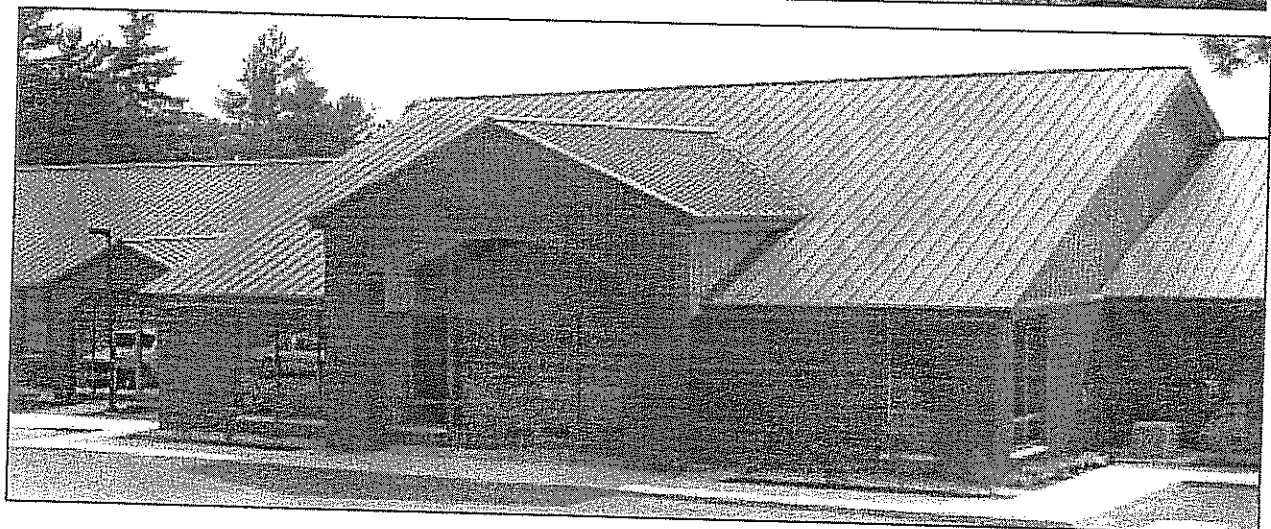
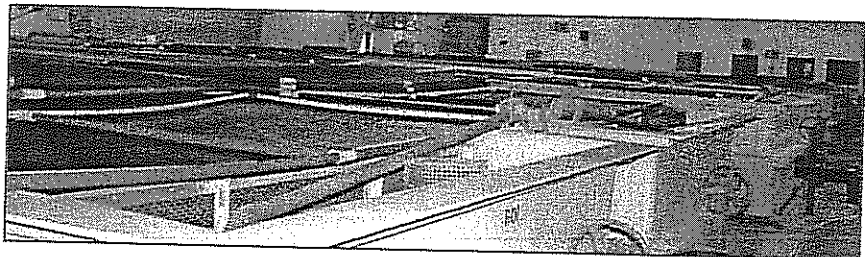


The Rio Vista Fish Technology Center will preserve genetic stocks and conduct population restoration research on state and federal imperiled species. Construction costs are estimated at \$16.5 to \$28 million.

The center will be staffed by 6 to 10 full-time employees. Annual salaries, operations, and maintenance costs are estimated between \$4.1 to \$6.8 million.

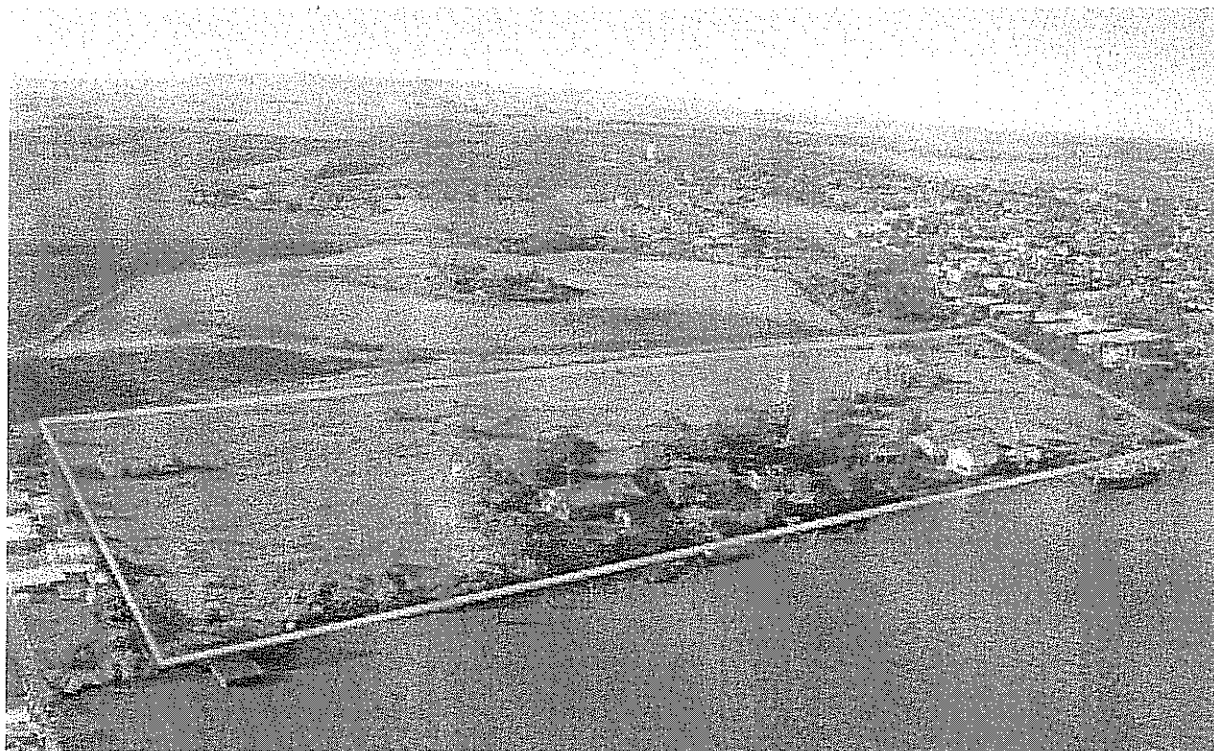


<b>Fish Technology Center</b>		
<i>(dollars in millions)</i>		
		Estimated Implementation
Estimated Construction:	Low	High
Construction	\$15.0	\$25.0
Equipment	\$1.0	\$2.0
Information Technology	\$0.5	\$1.0
Estimated Start Up Costs:		\$16.5      \$28.0
Estimated Annual Operations:	Low	High
Core Salaries:	\$1.1	\$1.8
<i>(FTE = 6 - 10 State/Federal)</i>		
Research & Monitoring	\$2.0	\$3.0
O&M	\$1.0	\$2.0
Estimated Annual Cost:		\$4.1      \$6.8
<b>Total: Aquatic Species Technology Cost</b>	<b>\$20.6</b>	<b>\$34.8</b>

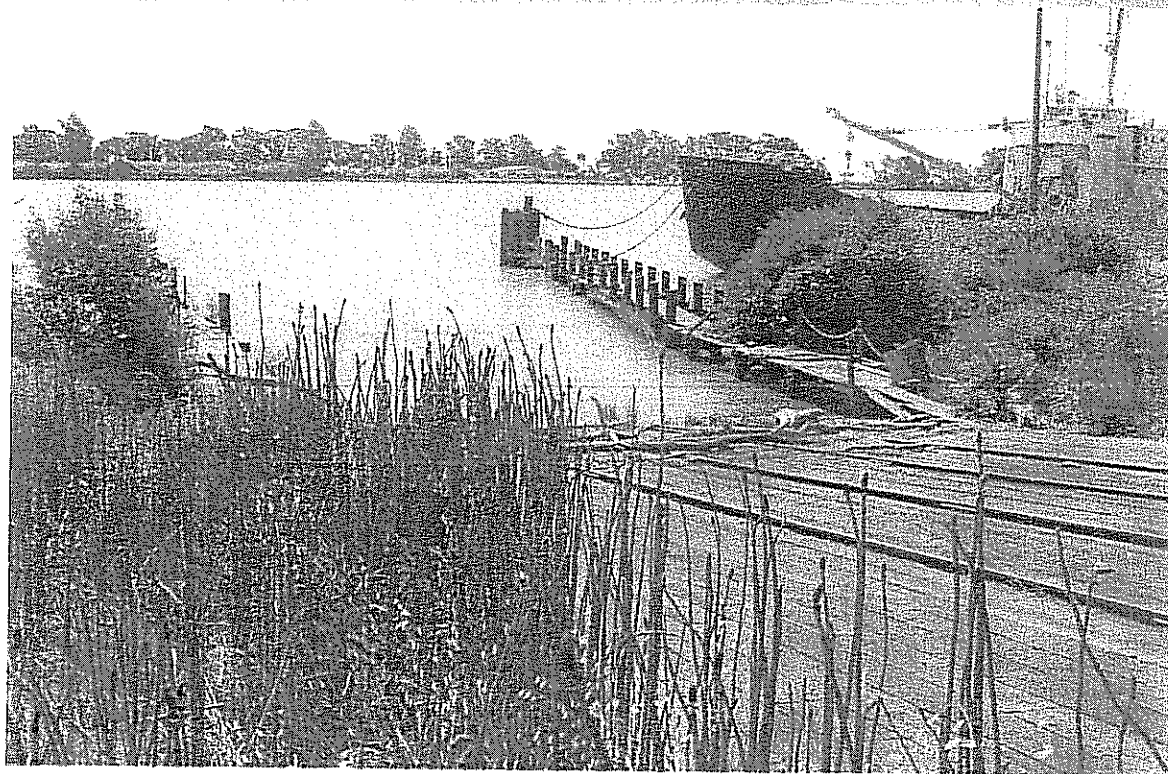
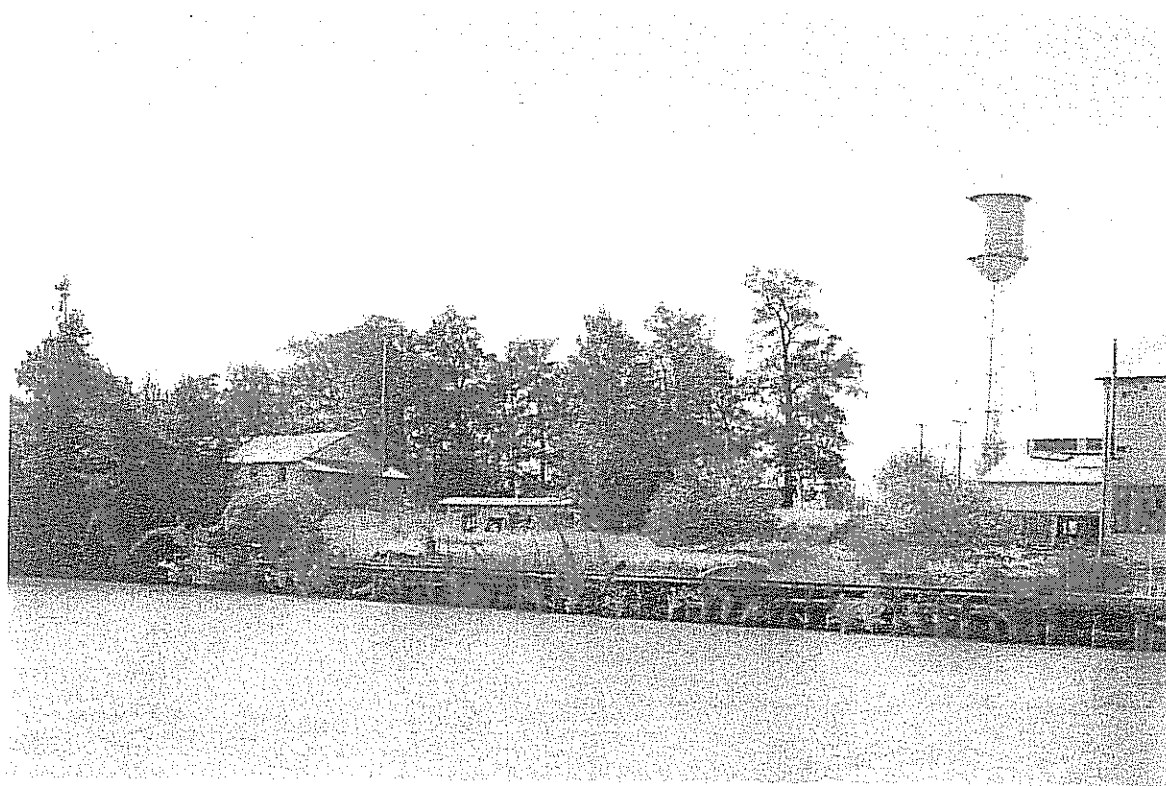




## City of Rio Vista Army Base – 28 Acres



## The Rio Vista Army Base – View from the River and the Ways



## **Interim Federal Action Plan for the California Bay-Delta, December 22, 2009**

On September 29, 2009, six Federal agencies – the Department of the Interior (DOI), Department of Commerce, Department of Agriculture (USDA), Department of the Army, Environmental Protection Agency (EPA), and the Council on Environmental Quality – signed the California Bay-Delta Memorandum of Understanding (MOU). The MOU established a Federal Leadership Committee to coordinate the Federal response to the California water crisis and to facilitate a partnership with the State of California in addressing California's water supply and environmental challenges. The MOU also committed the Federal agencies to develop an Interim Action Plan on an expedited basis.

This plan establishes a set of federal actions organized into four interconnected priorities. The third priority is to *Work in a Focused and Expedited Manner to Address the Degraded Bay-Delta*. Item B, under this priority, relates to the Rio Vista Fish Technology Center. It reads as follows:

### **B. Accelerate Construction and Upgrade of Facilities to Restore Delta Smelt and Other Native Aquatic Species**

**Federal agencies will actively pursue options for restoring populations of delta smelt and other imperiled native aquatic species through a restoration hatchery.** Delta smelt populations have declined so severely that immediate intervention will likely be needed to prevent their extinction in the wild. To ensure future viable smelt populations, and to guard against extinction of other native aquatic species, such as longfin smelt, green sturgeon, and split-tail, it will be necessary both to resolve questions of how to maintain genetic diversity and to find methods to raise large numbers of the species in captivity for reintroduction into restored habitat.

- 1) Fish Restoration Facility:** A Federal-State and City partnership, led by FWS, has been formed to promote development of a restoration facility. The partnership is working to secure the funding needed for the engineering analysis and design of a larger permanent facility – the Bay Delta Center for Collaborative Science and Restoration Propagation of Native Imperiled Aquatic Species – to be located at Rio Vista, CA. This facility would be capable of maintaining genetic refugia of delta smelt and other imperiled native aquatic species and producing the volumes of fish necessary for restoration and recovery. Federal agencies expect to partner with the State and City in conducting initial engineering design, site demolition and preparation activities, planning and environmental compliance consultation, and other activities.

## **Interim Federal Action Plan Status Update for the California Bay-Delta: 2011 and Beyond**

This document served to update Governor Brown and other leaders on the federal efforts in the Bay Delta as well as presenting the agencies' immediate priorities for addressing critical issues of ecosystem decline and water supply uncertainty.



Under the section: ***Next Steps on the Bay-Delta Conservation Plan***, the Rio Vista Collaborative Science Center was listed as a priority, as follows:

**2. Include the Rio Vista Collaborative Science Center and Native Fish Restoration Facility in the BDCP:** The Federal agencies believe an important part of the BDCP should be the construction and operation the Rio Vista Collaborative Science Center and Native Fish Restoration Facility as a conservation measure to address other stressors. The Collaborative Science Center will house several of the agencies that are part of the Bay-Delta's Interagency Ecological Program (IEP), a long standing, collaborative effort by FWS, Reclamation, the United States Geological Survey, EPA , NMFS, USACE, DFG, DWR, and the State Water Resources Control Board (SWRCB) to study and monitor the Bay-Delta ecosystem. The IEP's current facilities are inadequate and spread across several sites. The Collaborative Science Center will consolidate IEP offices, laboratories, vessels, and equipment in a single location closer to their study area, promoting cross-agency cooperation and prioritization, and increasing operational efficiency.

The Native Fish Restoration Facility will allow the Federal agencies to use conservation-oriented captive propagation techniques to help restore imperiled native fish populations. The Facility would house imperiled Bay-Delta species and conduct propagation, marking, and reintroduction research.

The Collaborative Science Center and Native Fish Restoration Facility should be a critical component of the BDCP and of Federal agencies' integrated Bay-Delta science initiative.

Federal agencies will continue efforts to develop these facilities at the earliest possible time.